# Highlights

## Overview

This issue of the *Natural Gas Monthly* contains estimates through May 1999 for many natural gas data series at the national level. Estimates of natural gas prices are available through February 1999 for most series. Highlights of the most recent data contained in this issue are:

- Dry natural gas production in May 1999, at 1,596 billion cubic feet, is nearly equal to that of May 1998. Cumulatively for the year, production is slightly lower (1 percent) than in 1998.
- During the 1998-99 heating season, working gas in storage was generally 20 percent or more above the levels of the prior heating season. However, estimates for the end of May 1999 show working gas exceeding the 1998 level by only 3 percent.
- Cumulative end-use natural gas consumption through May 1999 is estimated to be 3 percent higher than for the same period in 1998.
- Average monthly natural gas wellhead prices have been below $2.00 per thousand cubic feet since August 1998. The most recent estimate is $1.73 per thousand cubic feet in February 1999.

## Supply

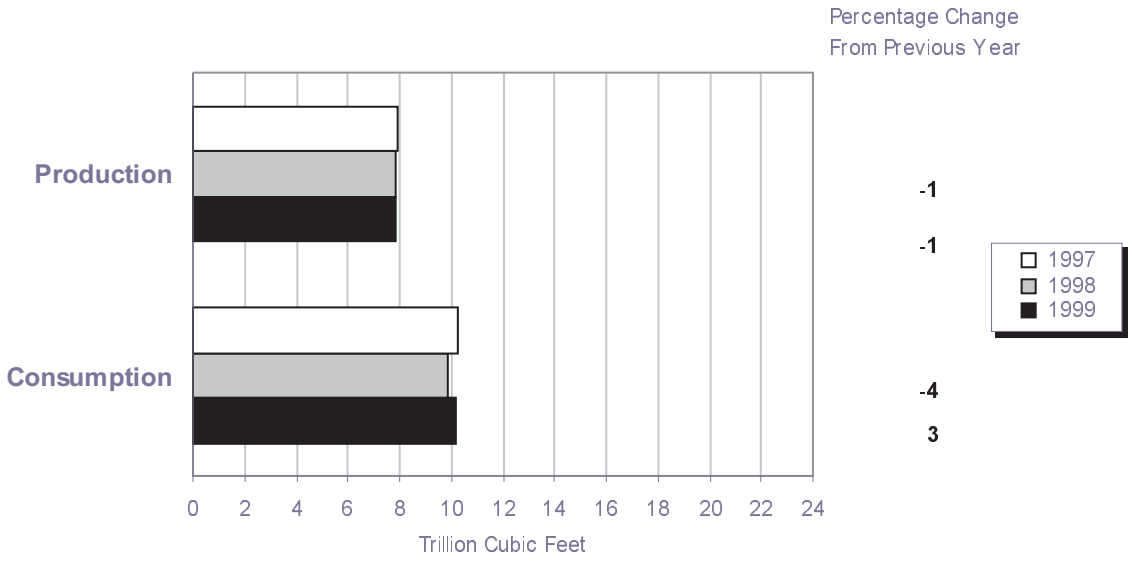
Natural gas supplies through May 1999 have been adequate to meet the slight increase seen in demand this year. Cumulative dry production is lower than during the same period of 1998, but by only 1 percent. Net imports have also increased, and storage levels at the end of May are somewhat higher than last year. Cumulatively through May 1999, dry natural gas production is estimated to be 54 billion cubic feet (1 percent) lower than during the same period in 1998 (Figure HI1). Production in May 1999 is estimated to be 1,596 billion cubic feet, nearly the same as the 1,600 billion cubic feet produced in May 1998 (Table 1).

Cumulative net imports of natural gas for January through May 1999 are estimated to be 98 billion cubic feet (8 percent) higher than in 1998 during the same period (Table 2). This increase in imports has occurred as additional pipeline capacity from Canada became available in the last quarter of 1998. Net imports during May 1999 are estimated to be 255 billion cubic feet, 15 billion cubic feet (6 percent) higher than in May 1998.

The amount of working gas in underground storage facilities as of March 31, 1999, the end of the 1998-99 heating season, is estimated to be 1,430 billion cubic feet (Figure HI2). This is the result not only of injections and withdrawals that occurred during the season, but also the reclassification of 47 billion cubic feet of working gas to base gas, which further reduced the working gas level.[1] Base gas (or cushion gas) is the amount of natural gas that is needed as a permanent inventory in a storage reservoir to maintain adequate pressure and deliverability. Working gas is the additional amount of gas that is added to base gas for storage purposes, to be withdrawn and consumed at a later time. The classification of gas as either base or working is an engineering decision based on the physical characteristics of each storage facility. These judgments may be adjusted over time. The March 1999 reclassification is a result of such an engineering evaluation by one company. Even with this reclassification, the estimate of working gas at the end of March 1999 is the highest end-of-March level since 1992. Estimated net injections during April and May 1999, the first 2 months

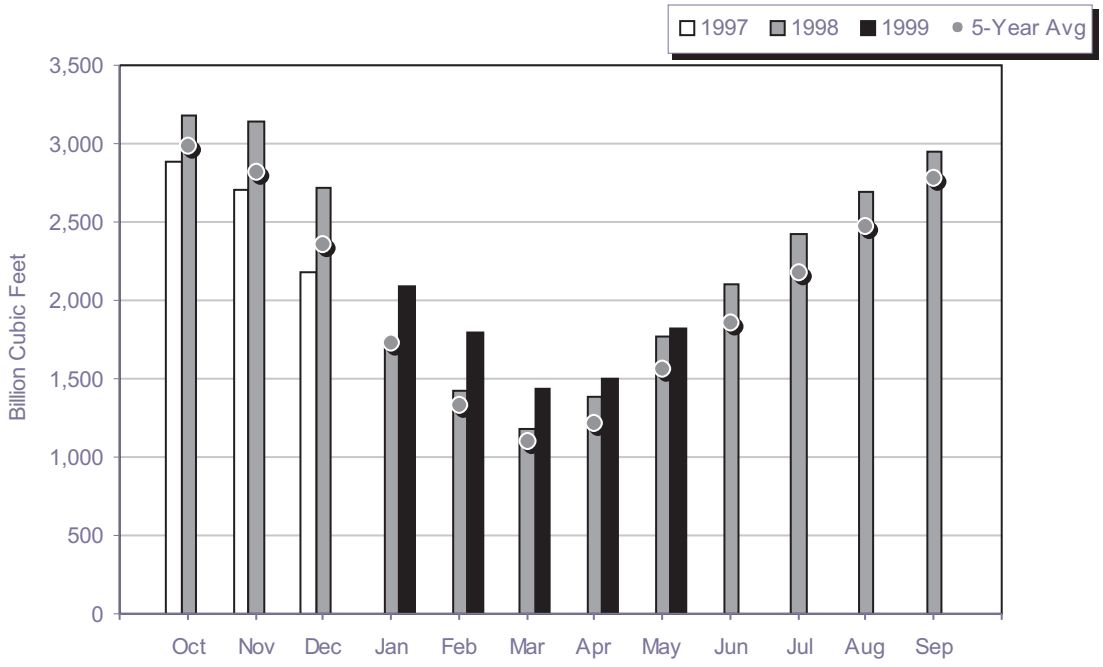
1 Energy Information Administration, *EIA Reports*. http://www.eia.doe.gov/neic/press/pressl29.html (May 26, 1999).

## Figure HI1. Natural Gas Production and Consumption, January-May, 1997-1999




**Source:** Table 2.

## Figure HI2. Working Gas in Underground Storage in the United States, 1997-1999




**Note:** The 5-year average is calculated using the latest available monthly data. For example, the December average is calculated from December storage levels for 1994 to 1998 while the January average is calculated from January levels for 1995 to 1999. Data are reported as of the end of the month, thus October data represent the beginning of the heating season.

**Source:** Form EIA-191, "Underground Natural Gas Storage Report," Form EIA-176, "Annual Report of Natural

of the refill season, are lower than a year ago. Thus, the estimate of working gas at the end of May 1999 is 1,825 billion cubic feet, 50 billion cubic feet (3 percent) higher than the 1998 level.

## End-Use Consumption

Cumulative end-use consumption of natural gas through May 1999 is estimated to be 3 percent higher than during the same period last year (Table 3). The increase is largely the result of cooler temperatures, as measured by heating degree days, in the early months of 1999 compared with 1998.[2] Cumulatively, residential consumption of natural gas through May 1999 is estimated to be 132 billion cubic feet (5 percent) higher than for the same period of 1998 (Figure HI3). In January alone, residential consumption was 102 billion cubic feet higher than in January 1998. Nationally, even though January 1999 was 8 percent warmer than normal, it was 15 percent colder than January 1998. The East North Central and Middle Atlantic Census Divisions were 23 percent colder in January 1999 than in January 1998. Residential users in these two areas tend to consume more natural gas than those in other parts of the country. Most recently, U.S. residential consumption for May 1999 is estimated to be 233 billion cubic feet, 12 billion cubic feet (5 percent) higher than in May 1998.

In the commercial sector, natural gas consumption for January through May 1999 is estimated to be 92 billion cubic feet (6 percent) higher than for the same period in 1998. As in the residential sector, commercial consumption is driven by the demand for space heating, and in January 1999 it was higher than in January 1998—32 billion cubic feet (7 percent) higher. Commercial consumption in May 1999 is estimated to be 201 billion cubic feet, which is 14 percent higher than in May 1998.

Cumulative industrial consumption of natural gas is slightly below that of last year. Through May 1999, estimates show that the industrial sector has consumed 42 billion cubic feet (1 percent) less than during the same period in 1998. In May 1999, the industrial sector consumed 682 billion cubic feet of natural gas, 10 billion cubic feet (1 percent) more than in May 1998.

Estimates for electric utility consumption of natural gas are available through February 1999. Electric utilities have consumed 26 billion cubic feet (9 percent) more during the first 2 months of 1999 than in 1998. During February 1999, consumption is estimated to be 152 billion cubic feet, which is 13 percent higher than in February 1998. These large increases have occurred even as the numbers of power plants operated by electric utilities have declined. Electric utilities are regulated entities. With the restructuring of the electricity industry, some electric utilities have sold power plants which then become nonutility electric generation facilities with a nonregulated status. Natural gas consumption by nonutility generators is included in the industrial sector, not the electric utility sector.

## Prices

The most recent natural gas wellhead price estimate is $1.73 per thousand cubic feet for February 1999 (Table 4). This is somewhat lower than the January 1999 average of $1.80 and is 14 percent lower than the price in February 1998 (also see Figure HI4). The highest wellhead price estimated during the 1998-99 heating season was $1.94 per thousand cubic feet in November 1998. Daily spot and futures prices have exhibited a similar pattern during the November through February period (Figure HI5). The daily average spot price and the futures settlement price on the nearby month contract, both at the Henry Hub, were generally above $2.00 per million Btu[3] in November and generally below $2.00 per million Btu from December 1998 through March 1999. The spot and futures prices did not reach $2.00 again until the last day of March 1999.

The prices paid for natural gas in the end-use sectors in early 1999 are also estimated to be lower than last year at the same time. The average residential and

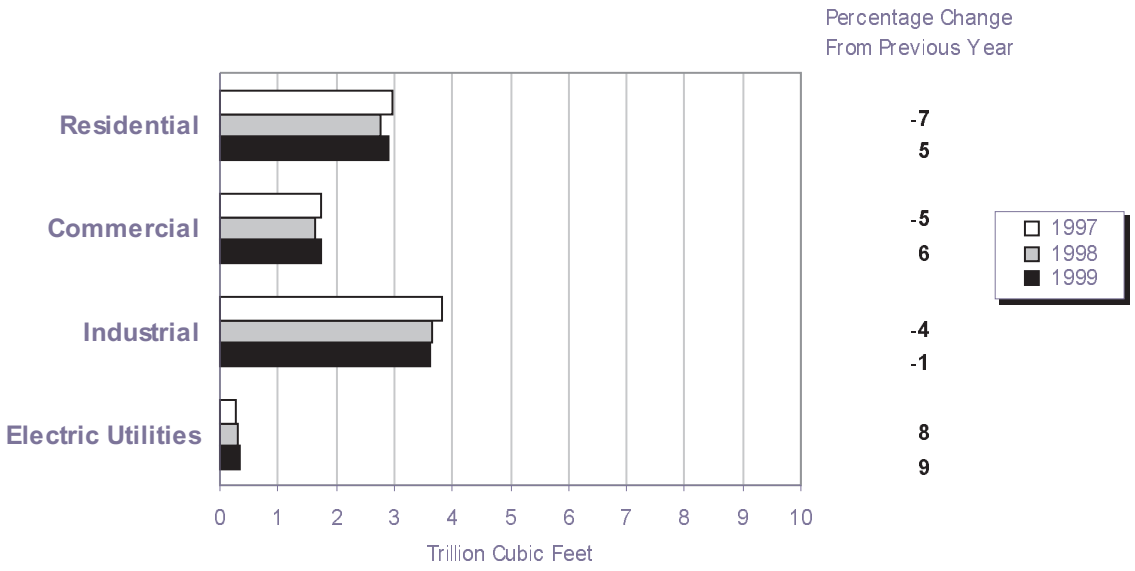
2 Heating degree days for the 1998-99 heating season are in the previous issue of this report: Energy Information Administration, *Natural Gas Monthly*, DOE/EIA-0130(99/04) (Washington, DC, May 1999), Table 26.

3 Prices in dollars per million Btu are roughly equivalent to prices in dollars per thousand cubic feet. Taking the price in dollars per million Btu and dividing by 1.03 will convert it to dollars per thousand cubic feet.

commercial prices[4] in February 1999 are estimated to be $6.24 and $5.18 per thousand cubic feet, respectively, 3 and 7 percent lower than in February 1998. In the industrial sector, the estimated price paid for natural gas in February 1999 is $2.99 per thousand cubic feet, 15 percent lower than a year ago. For the electric utility sector, the most recent price estimate is for January 1999, which at $2.26 per thousand cubic feet is 14 percent below that of January 1998.

More recent spot and futures prices at the Henry Hub during April and May 1999 have been above $2.00 per million Btu almost every day. During April, the futures settlement price climbed to $2.30 per million Btu and has been in the range of $2.20 to $2.35 for much of May 1999 (data are through May 21).

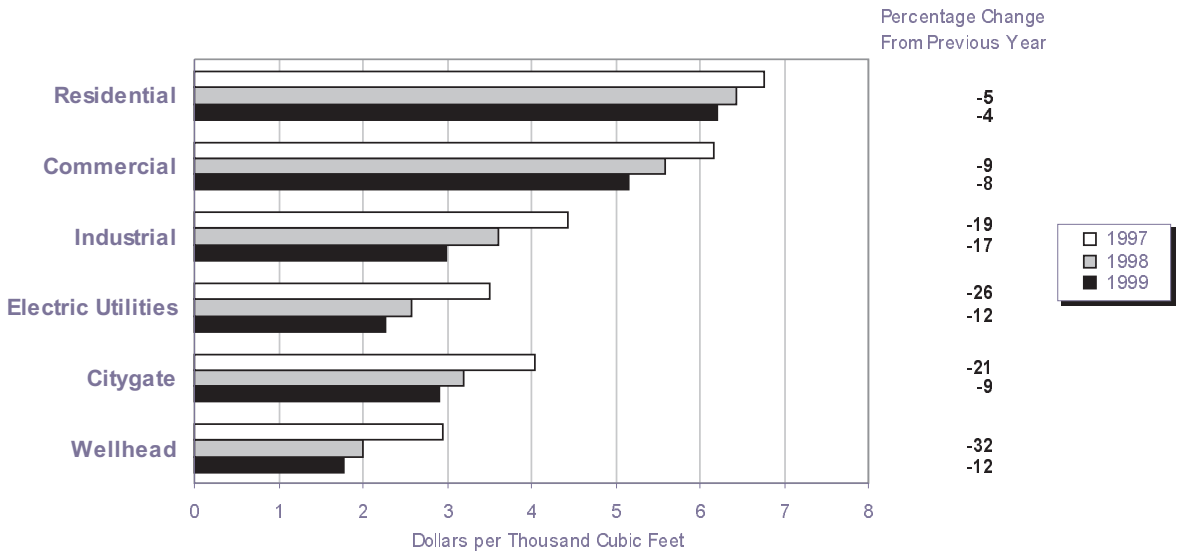
**Figure HI3. Natural Gas Delivered to Consumers, January-May, 1997-1999**




**Note:** Electric utilities reflect January-February deliveries.
**Source:** Table 3.

4 End-use prices in the residential, commercial, and industrial sectors are for onsystem gas sales only. While monthly onsystem sales are nearly 100 percent of residential deliveries, in 1998 they averaged 64 percent of commercial deliveries and only 15 percent of industrial deliveries (Table 4).

**Figure HI4. Average Delivered and Wellhead Natural Gas Prices, January-February, 1997-1999**




**Note:** Commercial and industrial average prices reflect onsystem sales only. The reporting of electric utility prices is 1 month behind the reporting of other prices.
**Source:** Table 4.

**Figure HI5. Daily Futures Settlement Prices at the Henry Hub**


**Note:** The future price is for the nearby month contract, that is, for the next contract to terminate trading. Contracts are traded on the New York Mercantile Exchange. April 1is the beginning of the natural gas storage refill season. November 1 is the beginning of the heating season.
**Source:** Commodity Futures Trading Commission, Division of Economic Analysis.